

Transistor with Silicon and Carbon Layer in the Channel Region

ABSTRACT OF THE DISCLOSURE

A transistor and method of manufacturing thereof having stressed material layers formed in the channel to increase the speed and improve performance of the transistor. A layer of silicon and carbon is epitaxially grown in the channel region. A thin semiconductor material may be formed over the layer of silicon and carbon, and a stressed semiconductor layer may be epitaxially grown prior to forming the layer of silicon and carbon.